Claims

1. A crimping tool to crimp a cylindrical ring about cylindrical plastic pipe, comprising:

(a) first and second handles operative to open and close first and second jaws, respectively, pivotally attached, respectively, to proximal ends of said first and second handles and to each other; and

(b) said first and second jaws being toothless and defining therebetween, when said first and second jaws are closed, a cylindrical opening, said cylindrical opening to crimp said cylindrical ring about said cylindrical plastic pipe, and to produce a tight seal between said cylindrical plastic pipe and a cylindrical substrate over which said cylindrical plastic pipe is inserted.

2. A crimping tool to crimp a cylindrical ring about cylindrical plastic pipe, as defined in Claim 1, first and second smooth surfaces above, and first and second smooth surfaces below, said cylindrical opening, said first and second smooth surfaces above said cylindrical opening being in abutting relationship when said first and second jaws are closed and said first and second smooth surfaces below said cylindrical opening being in abutting relationship when said first and second jaws are closed.

3. A crimping tool to crimp a cylindrical ring about cylindrical plastic pipe, as defined in Claim 2, wherein: said abutting relationship occurs in a common plane.

4. A crimping tool to crimp a cylindrical ring about cylindrical plastic pipe, as defined in Claim 1, further comprising: means to limit the distance apart said first and second jaws can be opened, such that distal ends of said jaws may be used to gauge whether said ring has been crimped to a specified diameter.

5. A crimping tool to crimp a cylindrical ring about cylindrical plastic pipe, as defined in Claim 5, wherein: said means to limit comprises a set screw threading inserted through one of said first and second jaws, a distal end of said set screw bearing against an inner surface of a second one of said first and second jaws.

6. A method of using a crimping tool to crimp a cylindrical ring around cylindrical plastic pipe, comprising:

(a) providing a crimping tool having first and second handles operative to open and close first and second jaws, respectively, pivotally attached, respectively, to proximal ends of said first and second handles and to each other; and said first and second jaws being toothless and defining therebetween, when said first and second jaws are closed, a cylindrical opening, said first and second jaws to crimp said cylindrical ring about said cylindrical plastic pipe, and to produce a tight seal between said cylindrical plastic pipe and a cylindrical substrate over which said cylindrical plastic pipe is inserted;

(b) sliding said cylindrical ring over said cylindrical plastic pipe;

(c) opening said crimping tool and moving said crimping tool over said cylindrical ring; and

(d) closing said crimping tool about said cylindrical ring.

7. A method of using a crimping tool to crimp a cylindrical ring around cylindrical plastic pipe, as defined in Claim 6, further comprising:

(e) using said crimping tool to gauge whether said crimping ring has been crimped to a proper diameter.

8. A method of using a crimping tool to crimp a cylindrical ring around cylindrical plastic pipe, as defined in Claim 7, further comprising: providing means to limit distance apart said first and second jaws can be opened and using distal ends of said first and second jaws to gauge.

9. A method of using a crimping tool to crimp a cylindrical ring around cylindrical plastic pipe, as defined in Claim 6, further comprising: moving said cylindrical ring to approximately middle of said substrate.

10. A method of using a crimping tool to crimp a cylindrical ring around cylindrical plastic pipe, as defined in Claim 6, further comprising: producing a said cylindrical crimped ring having minimal imperfections in an external peripheral surface thereof.

11. A method using a crimping tool to a crimp cylindrical ring around cylindrical plastic pipe, as defined in Claim 6, further comprising: providing first and second smooth surfaces above said cylindrical opening, and first and second smooth surfaces below said cylindrical opening, said first and second smooth surfaces above said cylindrical opening being in abutting relationship when said first and second jaws are closed and said first and second smooth surfaces below said cylindrical opening being in abutting relationship when said first and second jaws are closed.

12. A method of using a crimping tool to crimp a cylindrical ring around cylindrical plastic pipe, as defined in Claim 11, further comprising: providing said abutting relationship occurring in a common plane.

13. A method of using a crimping tool to crimp cylindrical rings around cylindrical plastic pipe, as defined in Claim 6, further comprising: providing about 15-20 percent of the crimping force required by conventional crimping tools.

14. A crimping tool to crimp a cylindrical ring about cylindrical plastic pipe, as defined in Claim 1, wherein: said cylindrical opening crimps said cylindrical ring substantially 90° perpendicular to said cylindrical plastic pipe and said cylindrical substrate, even when said cylindrical plastic pipe is initially skewed as much as 15 percent from a major axis of said cylindrical opening.

15. A method of using a crimping tool to crimp cylindrical rings around cylindrical plastic pipe, as defined in Claim 6, further comprising: providing said cylindrical opening to crimp said cylindrical ring substantially 90o perpendicular to said cylindrical plastic pipe and said cylindrical substate, even when said cylindrical plastic pipe is initially skewed as much as 15 percent from a major axis of said cylindrical opening.